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## 3. Document Type:

- ☒ Letter  
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## a. If letter or memo:

To: John R. Horan, Director Health and Safety Division  
 From: Claude W. Sill, Assistant Director for Technology Health and Safety Division  
 Subject: ANALYSIS BRANCH - MONTHLY REPORT - SEPTEMBER 1963

## b. If report:

Title:

## 4. Document Date:

October 3, 1963

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## 5. Summary (2-3 lines indicating the major subject(s) of the document):

This document discusses the Analysis Branch's activities for the month of September 1963. Several activities of note were; plans were being made for placing irradiation and radiation detection samples around the Special Power Excursion Reactor Test I (SPERT I) destruct area, plans were being made for biological and nuclear accident sampling of the System for Nuclear Auxiliary Power (SNAP)-10 destruct test, and eleven individuals were whole body counted for the Nation Wide Study.

6. Name and telephone number of person completing form:  Don C. Bradley (208) 525-0203	7. Organization:  Lockheed Idaho Technologies Co.	8. Date:  June 1, 1995
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## HUMAN RADIATION EXPERIMENTS

## RECORDS PROVENANCE FORM

REPOSITORY NAME		INEL
* COLLECTION NAME	ORIGINAL NAME	RESL READING FILES/MONTHLY ACTIVITY REPORTS
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BOX NUMBER		BOX #1
ADDITIONAL LOCATION INFORMATION		RESL CFA-690 ROOM #102 ON FLOOR
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Document Title: ANALYSIS BRANCH - MONTHLY REPORT - SEPTEMBER 1963

Cross references:

Items of Interest:

\* A NEW COLLECTION NAME REPLACED THE ORIGINAL DUE TO REORGANIZATION OF  
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analysis Branch - Monthly  
FOLDER Report - Sept-1963

John R. Horan, Director  
Health and Safety Division

October 3, 1963

Claude W. Sill, Ass't Director for Technology  
Health and Safety Division

**ANALYSIS BRANCH - MONTHLY REPORT - SEPTEMBER 1963**

SYMBOL: HSA:CPW

ROUTINE

Biological Samples (Urine, Feces, etc.)	855
Water Samples (Potable, Effluents, etc.)	319
Ecological Samples (Milk, Veg. Fowl, Thyroids)	98
Air Dusts (carbon cartridges, filters, etc.)	257
Miscellaneous	3
Whole-Body Scans	181

RESEARCH

The cerium separation on barium sulfate procedure was checked out on one week old fission products to determine Ce 141, Ce 143, and Ce 144 with very satisfactory results. The interference effects of most of the elements of the periodic table were checked on the cerium separation on barium sulfate.

A procedure is being developed for the determination of natural uranium, thorium, radium 226 and lead 210 from a single sample of solid mill tailings. This procedure is based on the barium sulfate separation procedure developed in this laboratory.

The detection limit was determined on the unshielded whole-body counter and several tests were made on shielding outside the counting room. A new resolver unit was installed on the gamma spectrometer for data stripping and preliminary tests were made to determine qualitative and quantitative possibilities.

Research was carried out on the decomposition of one pound quantities of grain for the separation and identification of manganese 54. Manganese 54 was verified in quantities of from 0.1 to 1 pico curies per gram of local wheat.

Preparations are being made for placing irradiation and radiation detection samples around the SPERT I Destruct area. Plans are being made for biological and nuclear accident sampling of the SNAP-10 Destruct test.

October 3, 1963

SPECIAL ACTIVITIES

The manuscript entitled "Detection of Submicrogram Quantities of Yttrium" was completed and is being sent to Analytical Chemistry for publication.

Permission has been requested for use of the MTR pile by the Analysis Branch for activation analysis.

WHOLE-BODY COUNTING FACILITIES

One hundred and seventy-six individuals were counted during the month for a total of 131 counts. Of these 11 were for the special nation wide study; 11 other, specials; 103 routine, and 51 termination.